**Homework 30** Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Solve Quadratic Equations -Review** Period:\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Solve the equation by graphing. How many solutions are there? Label the ***vertex*** and ***axis of symmetry***!

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| 1) | 2) | 3) |
| 4) What is the sum of the two values that satisfy the equation below? | 5) Solve the quadratic equation by factoring: | 6) Find the zeros of the polynomial function: |
| 7) Find the zeros of the functions by graphing.  x = { , } | 8) Find the zeros of the functions by graphing.  x = { , } | 9) The graph  is shown below. How many solutions does this quadratic equation have?   1. 0 2. 1 3. 2 4. 3 |

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| Use square roots. |

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Name the quadratic equation given the solution set.

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| 3. {–8, 5} | 4. {–3, 3} | 5. {–5, –9} |

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| 7) You throw a wad of used paper towards a wastebasket from a height of **1.3** feet above the floor with an initial vertical velocity of **3** feet per second. The flight of the paper wad can be modeled with the function  **h(t) = -16t2 + 3t + 1.3**, where h represents the height (in feet) of the paper wad after t seconds after it was thrown. If you miss the wastebasket and the paper hits the floor, how long does it take for the paper to reach the floor? | 8) During a cliff dive competition, a diver begins a dive with his center of gravity 70 feet above the water. The initial vertical velocity of his dive is 8 feet per second.   1. Write an equation that models the height h (in feet) of the divers center of gravity as a function of time (seconds) **h(t) = -16t2 + \_\_\_t + \_\_\_** 2. How long after the diver begins his dive does his center of gravity reach the water? |